



DEPARTMENT OF TRANSPORTATION

Federal Aviation Administration

14 CFR Part 39

[Docket No. FAA-2021-0613; Project Identifier MCAI-2020-01431-T]

RIN 2120-AA64

Airworthiness Directives; De Havilland Aircraft of Canada Limited (Type Certificate Previously Held by Bombardier, Inc.) Airplanes

AGENCY: Federal Aviation Administration (FAA), DOT.

ACTION: Notice of proposed rulemaking (NPRM).

SUMMARY: The FAA proposes to adopt a new airworthiness directive (AD) for certain De Havilland Aircraft of Canada Limited Model DHC-8-400, -401, and -402 airplanes. This proposed AD was prompted by a report of cracking found on a main landing gear (MLG) drag strut assembly. This proposed AD would require a records review to determine if an affected MLG drag strut assembly is installed, repetitive detailed inspections for cracking of affected strut assemblies, a one-time magnetic particle inspection for cracking, and on-condition actions if necessary. The FAA is proposing this AD to address the unsafe condition on these products.

DATES: The FAA must receive comments on this proposed AD by [INSERT DATE 45 DAYS AFTER DATE OF PUBLICATION IN THE FEDERAL REGISTER].

ADDRESSES: You may send comments, using the procedures found in 14 CFR 11.43 and 11.45, by any of the following methods:

- Federal eRulemaking Portal: Go to <https://www.regulations.gov>. Follow the instructions for submitting comments.
- Fax: 202-493-2251.
- Mail: U.S. Department of Transportation, Docket Operations, M-30, West

Building Ground Floor, Room W12-140, 1200 New Jersey Avenue SE, Washington, DC 20590.

- Hand Delivery: Deliver to Mail address above between 9 a.m. and 5 p.m., Monday through Friday, except Federal holidays.

Examining the AD Docket

You may examine the AD docket at <https://www.regulations.gov> by searching for and locating Docket No. FAA-2021-0613; or in person at Docket Operations between 9 a.m. and 5 p.m., Monday through Friday, except Federal holidays. The AD docket contains this NPRM, any comments received, and other information. The street address for Docket Operations is listed above.

FOR FURTHER INFORMATION CONTACT: Aziz Ahmed, Aerospace Engineer, Airframe and Propulsion Section, FAA, New York ACO Branch, 1600 Stewart Avenue, Suite 410, Westbury, NY 11590; telephone 516-228-7329; fax 516-794-5531; email 9-avs-nyaco-cos@faa.gov.

SUPPLEMENTARY INFORMATION:

Comments Invited

The FAA invites you to send any written relevant data, views, or arguments about this proposal. Send your comments to an address listed under ADDRESSES. Include “Docket No. FAA-2021-0613; Project Identifier MCAI-2020-01431-T” at the beginning of your comments. The most helpful comments reference a specific portion of the proposal, explain the reason for any recommended change, and include supporting data. The FAA will consider all comments received by the closing date and may amend the proposal because of those comments.

Except for Confidential Business Information (CBI) as described in the following paragraph, and other information as described in 14 CFR 11.35, the FAA will post all comments received, without change, to <https://www.regulations.gov>, including any

personal information you provide. The agency will also post a report summarizing each substantive verbal contact received about this NPRM.

Confidential Business Information

CBI is commercial or financial information that is both customarily and actually treated as private by its owner. Under the Freedom of Information Act (FOIA) (5 U.S.C. 552), CBI is exempt from public disclosure. If your comments responsive to this NPRM contain commercial or financial information that is customarily treated as private, that you actually treat as private, and that is relevant or responsive to this NPRM, it is important that you clearly designate the submitted comments as CBI. Please mark each page of your submission containing CBI as “PROPIN.” The FAA will treat such marked submissions as confidential under the FOIA, and they will not be placed in the public docket of this NPRM. Submissions containing CBI should be sent to Aziz Ahmed, Aerospace Engineer, Airframe and Propulsion Section, FAA, New York ACO Branch, 1600 Stewart Avenue, Suite 410, Westbury, NY 11590; telephone 516-228-7329; fax 516-794-5531; email 9-avs-nyaco-cos@faa.gov. Any commentary that the FAA receives which is not specifically designated as CBI will be placed in the public docket for this rulemaking.

Background

Transport Canada Civil Aviation (TCCA), which is the aviation authority for Canada, has issued TCCA AD CF-2020-43, dated October 21, 2020 (referred to after this as the Mandatory Continuing Airworthiness Information, or “the MCAI”), to correct an unsafe condition for certain De Havilland Aircraft of Canada Limited Model DHC-8-400, -401, and -402 airplanes. You may examine the MCAI in the AD docket at <https://www.regulations.gov> by searching for and locating Docket No. FAA-2021-0613.

This proposed AD was prompted by a report of cracking found on an MLG drag strut assembly. The MLG drag strut had accumulated a total of 26,968 flight cycles and

12,392 flight hours since new, of which 2,830 flight cycles and 1,420 flight hours had accumulated since the last overhaul. The last overhaul had been conducted one year prior to the crack finding. It is suspected that the cracking was caused by the clamping method used by the repair facility during the most recent overhaul, and was missed during subsequent non-destructive testing (NDT) inspections required as part of the refurbishment process. The FAA is proposing this AD to address cracking of the MLG drag strut assembly and possible failure under compression loads during landing or ground operations, which could result in asymmetric MLG configuration and potential runway excursion. See the MCAI for additional background information.

FAA's Determination

This product has been approved by the aviation authority of another country, and is approved for operation in the United States. Pursuant to the FAA's bilateral agreement with the State of Design Authority, the FAA has been notified of the unsafe condition described in the MCAI and service information referenced above. The FAA is proposing this AD because the FAA evaluated all the relevant information and determined the unsafe condition described previously is likely to exist or develop on other products of the same type design.

Proposed AD Requirements in this NPRM

This proposed AD would require a records review to determine if an affected MLG drag strut assembly is installed, repetitive detailed inspections for cracking of affected strut assemblies, a one-time magnetic particle inspection for cracking, and on-condition actions if necessary. On-condition actions include replacing the MLG drag strut assembly and re-identifying the MLG drag strut assembly.

Costs of Compliance

The FAA estimates that this AD, if adopted as proposed, would affect 34 airplanes of U.S. registry. The FAA estimates the following costs to comply with this proposed AD:

Estimated costs for required actions

Labor cost	Parts cost	Cost per product	Cost on U.S. operators
Up to 11 work-hours X \$85 per hour = Up to \$935	\$0	Up to \$935	Up to \$31,790

The FAA estimates the following costs to do any necessary on-condition actions that would be required based on the results of any required actions. The FAA has no way of determining the number of aircraft that might need these on-condition actions:

Estimated costs of on-condition actions

Labor cost	Parts cost	Cost per product	Cost on U.S. operators
Up to 10 work-hours X \$85 per hour = Up to \$850	\$*	Up to \$850	Up to \$850

*The FAA has received no definitive data that would enable the agency to provide parts cost estimates for the actions specified in this proposed AD.

The FAA has included all known costs in its cost estimate. According to the manufacturer, however, some or all of the costs of this proposed AD may be covered under warranty, thereby reducing the cost impact on affected operators.

Authority for this Rulemaking

Title 49 of the United States Code specifies the FAA's authority to issue rules on aviation safety. Subtitle I, section 106, describes the authority of the FAA Administrator. Subtitle VII: Aviation Programs, describes in more detail the scope of the Agency's authority.

The FAA is issuing this rulemaking under the authority described in Subtitle VII, Part A, Subpart III, Section 44701: General requirements. Under that section, Congress

charges the FAA with promoting safe flight of civil aircraft in air commerce by prescribing regulations for practices, methods, and procedures the Administrator finds necessary for safety in air commerce. This regulation is within the scope of that authority because it addresses an unsafe condition that is likely to exist or develop on products identified in this rulemaking action.

Regulatory Findings

The FAA determined that this proposed AD would not have federalism implications under Executive Order 13132. This proposed AD would not have a substantial direct effect on the States, on the relationship between the national Government and the States, or on the distribution of power and responsibilities among the various levels of government.

For the reasons discussed above, I certify this proposed regulation:

- (1) Is not a “significant regulatory action” under Executive Order 12866,
- (2) Would not affect intrastate aviation in Alaska, and
- (3) Would not have a significant economic impact, positive or negative, on a substantial number of small entities under the criteria of the Regulatory Flexibility Act.

List of Subjects in 14 CFR Part 39

Air transportation, Aircraft, Aviation safety, Incorporation by reference, Safety.

The Proposed Amendment

Accordingly, under the authority delegated to me by the Administrator, the FAA proposes to amend 14 CFR part 39 as follows:

PART 39 - AIRWORTHINESS DIRECTIVES

- 1. The authority citation for part 39 continues to read as follows:

Authority: 49 U.S.C. 106(g), 40113, 44701.

§ 39.13 [Amended]

- 2. The FAA amends § 39.13 by adding the following new airworthiness directive:

De Havilland Aircraft of Canada Limited (Type Certificate Previously Held by Bombardier, Inc.): Docket No. FAA-2021-0613; Project Identifier MCAI-2020-01431-T.

(a) Comments Due Date

The FAA must receive comments on this airworthiness directive (AD) by [INSERT DATE 45 DAYS AFTER DATE OF PUBLICATION IN THE FEDERAL REGISTER].

(b) Affected ADs

None.

(c) Applicability

This AD applies to De Havilland Aircraft of Canada Limited Model DHC-8-400, -401, and -402 airplanes, certificated in any category, serial numbers 4001, 4003, and subsequent.

(d) Subject

Air Transport Association (ATA) of America Code 32, Landing Gear.

(e) Unsafe Condition

This AD was prompted by a report of cracking found on a main landing gear (MLG) drag strut assembly. The FAA is issuing this AD to address cracking of the MLG drag strut assembly and possible failure under compression loads during landing or ground operations, which could result in asymmetric MLG configuration and potential runway excursion.

(f) Compliance

Comply with this AD within the compliance times specified, unless already done.

(g) Records Review, Repetitive Inspections, and On-Condition Actions

Within 30 days after the effective date of this AD: Review the applicable airplane maintenance records to determine if any affected MLG drag strut assembly identified in

figure 1 to the introductory text of paragraph (g) of this AD is installed. If any affected MLG drag strut assembly is installed, do the actions specified in paragraphs (g)(1) and (2) of this AD.

Figure 1 to the introductory text of paragraph (g) – Affected MLG Drag Strut Assembly

Part Number	Serial Number
46301-13	MBM0056
	MBM0073
	MBM0076
	MBM0130
	MBM0136
	MBM0145
	MBM0179
	MBM0204
	MBM0208
	MBM0302
	MBM0303
	MBM0324
	MBM0405
	MBM0408
	MBM0412
	MBM0417
	MBM0423

(1) Within 80 flight hours after accomplishing the records review required by paragraph (g) of this AD, do a detailed inspection for cracking of the affected MLG drag strut assembly, and do all applicable on-condition actions before further flight, in accordance with a method approved by the Manager, New York ACO Branch, FAA. Repeat the inspection thereafter at intervals not to exceed 80 flight hours until the magnetic particle inspection required by paragraph (g)(2) of this AD is done.

Note 1 to paragraph (g)(1): Guidance on the inspections and on-condition actions required by this AD can be found in Transport Canada Civil Aviation (TCCA) AD CF-2020-43, dated October 21, 2020.

(2) Within 1,600 flight hours or 12 months after the effective date of this AD, whichever occurs first, perform a magnetic particle inspection for cracks of the entire tubular section of the affected MLG drag strut assembly, and do all on-condition actions before further flight, in accordance with a method approved by the Manager, New York ACO Branch, FAA. Performing the magnetic particle inspection required by this paragraph terminates the repetitive detailed inspections required by paragraph (g)(1) of this AD.

(h) Parts Installation Prohibition

As of the effective date of this AD, no person may install an affected MLG drag strut assembly identified in figure 1 to the introductory text of paragraph (g) of this AD on any airplane unless the inspections and applicable on-conditions specified in paragraphs (g)(1) and (2) of this AD are done before further flight.

(i) Other FAA AD Provisions

The following provisions also apply to this AD:

(1) *Alternative Methods of Compliance (AMOCs)*: The Manager, New York ACO Branch, FAA, has the authority to approve AMOCs for this AD, if requested using the procedures found in 14 CFR 39.19. In accordance with 14 CFR 39.19, send your request to your principal inspector or responsible Flight Standards Office, as appropriate. If sending information directly to the manager of the certification office, send it to ATTN: Program Manager, Continuing Operational Safety, FAA, New York ACO Branch, 1600 Stewart Avenue, Suite 410, Westbury, NY 11590; telephone 516-228-7300; fax 516-794-5531. Before using any approved AMOC, notify your appropriate principal

inspector, or lacking a principal inspector, the manager of the responsible Flight Standards Office.

(2) *Contacting the Manufacturer*: For any requirement in this AD to obtain instructions from a manufacturer, the instructions must be accomplished using a method approved by the Manager, New York ACO Branch, FAA; or Transport Canada Civil Aviation (TCCA); or De Havilland Aircraft of Canada Limited's TCCA Design Approval Organization (DAO). If approved by the DAO, the approval must include the DAO-authorized signature.

(j) Related Information

(1) Refer to Mandatory Continuing Airworthiness Information (MCAI) TCCA AD CF-2020-43, dated October 21, 2020, for related information. This MCAI may be found in the AD docket on the Internet at <https://www.regulations.gov> by searching for and locating Docket No. FAA-2021-0613.

(2) For more information about this AD, contact Aziz Ahmed, Aerospace Engineer, Airframe and Propulsion Section, FAA, New York ACO Branch, 1600 Stewart Avenue, Suite 410, Westbury, NY 11590; telephone 516-228-7329; fax 516-794-5531; email 9-avs-nyaco-cos@faa.gov.

(3) For information about TCCA AD CF-2020-43, dated October 21, 2020, contact TCCA, Transport Canada National Aircraft Certification, 159 Cleopatra Drive, Nepean, Ontario K1A 0N5, Canada; telephone 888-663-3639; email AD-CN@tc.gc.ca; Internet <https://tc.canada.ca/en/aviation>. You may view this service information at the FAA, Airworthiness Products Section, Operational Safety Branch, 2200 South 216th St., Des Moines, WA. For information on the availability of this material at the FAA, call 206-231-3195.

Issued on July 28, 2021.

Lance T. Gant, Director,
Compliance & Airworthiness Division,
Aircraft Certification Service.

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